

We claim:

- Sub A3*
1. A substantially purified nucleic acid molecule that encodes an algal protein or fragment thereof comprising a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 5674.
- 5 2. The substantially purified nucleic acid molecule according to claim 1, wherein said algal protein or fragment thereof is a *Cyanidium caldarium* protein or fragment thereof.
3. A substantially purified *Cyanidium caldarium* protein homologue or fragment thereof encoded by a nucleic acid molecule that comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 5674.
- 10 4. A transformed cell having a nucleic acid molecule which comprises:
- (A) an exogenous promoter region which functions in said cell to cause the production of a mRNA molecule; which is linked to
- (B) a structural nucleic acid molecule, wherein said structural nucleic acid molecule comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO: 1 through SEQ ID NO: 5674; which is linked to
- 15 (C) a 3' non-translated sequence that functions in said cell to cause termination of transcription and addition of polyadenylated ribonucleotides to a 3' end of said mRNA molecule.
5. The transformed cell according to claim 4, wherein said cell is selected from the group consisting of an algal cell, a plant cell, a mammalian cell, a fungal cell and an insect cell.
- 20 6. The transformed cell according to claim 4, wherein said cell is an algal cell
7. The transformed cell according to claim 6, wherein said cell is a *Cyanidium caldarium* cell.